APPENDIX G
USCG LETTER

U.S. Department
of Transportation

**United States
Coast Guard**

Commanding Officer
U.S. Coast Guard

Aircraft Repair & Supply Center
Elizabeth City, NC 27909-5001
Staff Symbol: 3000
Phone: (252) 335-6240

13000
May 5, 1998

Ms. Lisa Johnson
Boeing North American-SSD
555 Discovery Drive
Huntsville, AL 95806-2809

Dear Ms. Johnson:

The evaluation of Laser Identification Markings on 17-4PH and 4340 Steel (LTR7183-4043) was reviewed by ARSC Engineering and a copy sent to the original equipment manager.

We are shipping 10 torque pressure transducer components (17-4PH material) to you for direct laser marking of a 2D matrix code. Please consecutively mark these parts beginning with 000 000 000 501. We would appreciate it if you return all 10 parts as soon as the marking is completed.

My point of contact for this effort is AE1 D. Walsh. She can be reached at (252) 335-6830.

Sincerely,

D. C. CONNOR
Commander, U.S. Coast Guard
Chief, Industrial Support Division
By direction of the Commanding Officer

APPENDIX H
USCG UNITS

The following is a list of Air Stations physically evaluated:

ARSC
AIRSTA Clearwater, FL
AIRSTA Elizabeth City, NC
AIRSTA New Orleans, LA
AIRSTA North Bend, OR
AIRSTA Savannah, GA
AIRSTA Traverse City, MI

APPENDIX I
DISCREPANCY REPORTS

Label/Marking Discrepancy Report

Date: 1/14/98
Report Number: 1

Employee Name: AIRSTA Savannah
Phone: (912) 652-4644
Fax: (912) 652-4645

Test Cycle/Inspection # _____

Description of Marked Part

Aircraft Type: HH-65 Aircraft Tail Number: 6573

Part Number: 365A31-1810-02MO Part Serial Number: M1526

Part Nomenclature: Starflex Assembly, Main Rotor Head

Label Evaluation (Check Appropriate Blocks) N/A

Label Stock

- ☐ Bubbled/Blistered
- ☐ Discolored
- ☐ Lamination Separated
- ☐ Burnt
- ☐ Peeling
- ☐ Distorted
- ☐ Melted

Symbol Marking

- ☐ Faded
- ☐ Smeared
- ☐ Scratched
- ☐ Abraded
- ☐ Color change
- ☐ Poor Edge definition
- ☐ Streaks
- ☐ Repetitive Voids in Marking

Comments:

Label fell off after six days and 9.5 flight hours since marked. Casting surface on part is extremely rough.

This section to be filled in by BNA

Label Description: _____

Size: _____ Stock Type: _____ Overcoat or lamina: _____

Ink Type: _____ Adhesive Type: _____

Label/Marking Discrepancy Report

Date: 1/14/98
Employee Name: AIRSTA Savannah
Phone: (912) 652-4644
Fax: (912) 652-4645

Report Number: 2

Test Cycle/Inspection # _____

Description of Marked Part

Aircraft Type: HH-65 Aircraft Tail Number: 6573
Part Number: 365A31-1850-03 Part Serial Number: M3248
Part Nomenclature: Upper Attach Beam, Main Rotor Head

Label Evaluation (Check Appropriate Blocks) N/A

Label Stock

- ☐ Bubbled/Blistered
- ☐ Discolored
- ☐ Lamination Separated
- ☐ Burnt
- ☐ Peeling
- ☐ Distorted
- ☐ Melted

Symbol Marking

- ☐ Faded
- ☐ Smeared
- ☐ Scratched
- ☐ Abraded
- ☐ Color change
- ☐ Poor Edge definition
- ☐ Streaks
- ☐ Repetitive Voids in Marking

Comments:

Label fell off after six days and 9.5 flight hours since marked. Casting surface on part is extremely rough.

This section to be filled in by BNA

Label Description: _____

Size: _____ Stock Type: _____ Overcoat or lamina: _____

Ink Type: _____ Adhesive Type: _____

Label/Marking Discrepancy Report

Date: 2/10/98
Employee Name: AIRSTA Savannah
Phone: (912) 652-4644
Fax: (912) 652-4645

Report Number: 3

Test Cycle/Inspection # _____

Description of Marked Part

Aircraft Type: HH-65 Aircraft Tail Number: 6573

Part Number: SC7282 Part Serial Number: Ø4

Part Nomenclature: Tail Rotor Servo

Label Evaluation (Check Appropriate Blocks) N/A

Label Stock		**Symbol Marking**	
☐	Bubbled/Blistered	☐	Faded
☐	Discolored	☐	Smeared
☐	Lamination Separated	☐	Scratched
☐	Burnt	☐	Abraded
☐	Peeling	☐	Color change
☐	Distorted	☐	Poor Edge definition
☐	Melted	☐	Streaks
		☐	Repetitive Voids in Marking

Comments:

Aircraft mechanic touched the label and got MIL-H-5606 hydraulic fluid on it. When he wiped it off, the ~~pi~~ print on the label was removed. 62 flt. hours since marking.

This section to be filled in by BNA

Label Description: _____

Size: _____ Stock Type: _____ Overcoat or lamina: _____

Ink Type: _____ Adhesive Type: _____

Label/Marking Discrepancy Report

Date: 2/10/98
Employee Name: AIRSTA Savannah
Phone: (912) 652-4644
Fax: (912) 652-4645

Report Number: 4

Test Cycle/Inspection #: _____

Description of Marked Part

Aircraft Type: HH-65 Aircraft Tail Number: 6573
Part Number: 365A33-6005-02M Part Serial Number: M140
Part Nomenclature: Tail Gear Box Assembly

Label Evaluation (Check Appropriate Blocks) N/A

Label Stock

- ☐ Bubbled/Blistered
- ☐ Discolored
- ☐ Lamination Separated
- ☐ Burnt
- ☐ Peeling
- ☐ Distorted
- ☐ Melted

Symbol Marking

- ☐ Faded
- ☐ Smeared
- ☐ Scratched
- ☐ Abraded
- ☐ Color change
- ☐ Poor Edge definition
- ☐ Streaks
- ☐ Repetitive Voids in Marking

Comments:

Aircraft mechanic sprayed Kemtronics Electro Wash degreaser on the TGB assembly including the 2D label. When he wiped the label, the print was removed. 62 flt. hours since marking.

This section to be filled in by BNA

Label Description: _____

Size: _____ Stock Type: _____ Overcoat or lamina: _____

Ink Type: _____ Adhesive Type: _____

APPENDIX J
LABEL SPECIFICATIONS

Computype®
IDentification Concepts

SUPER DESTRUCTIBLE

FACE STOCK	2 mil tamperproof vinyl
ADHESIVE	1 mil permanent acrylic with high initial tack and ultimate adhesion. Highly resistant to heat, cold, moisture and ultra-violet rays. High peel and shear strength.
LINER	50# silicone coated glassine paper
LAMINATE	2 mil clear destructible acetate with 0.8 mil ultra-clear adhesive.

GENERAL CHARACTERISTICS

DIMENSIONAL STABILITY	Excellent
CHEMICAL RESISTANCE	Resistant to water, mild acids, salt and alkalis, most petroleum based greases, oils and lower aliphatic solvents.
ABRASION RESISTANCE	Excellent
MINIMUM APPLICATION TEMPERATURE	+40°F. (+4°C.)
SERVICE TEMPERATURE RANGE	-50°F. to +220°F. (-46°C. to +104°C.)

38 Locke Road, Concord, New Hampshire 03301-5416 ◦ 603-225-5500 800-881-2633 ◦ Fax 603-225-7306
Corporate Headquarters, 2285 West County Road C, Saint Paul, Minnesota 55113-2567 ◦ 612-633-0633 800-328-0852 ◦ Fax 612-633-7122

Yankee Concepts
Computype International

SUPER COMPUCODE

FACE STOCK	2 mil tamperproof vinyl
ADHESIVE	1 mil permanent acrylic, high initial tack and ultimate adhesion. Highly resistant to heat, cold, moisture and ultra-violet rays. High peel and shear strength.
LINER	50# silicone coated glassine paper
LAMINATE	0.5 mil clear polyester with 0.8 mil adhesive

GENERAL CHARACTERISTICS

DIMENSIONAL STABILITY	Excellent
CHEMICAL RESISTANCE	Resistant to water, mild acids, salt and alkalis, most petroleum based greases, oils and lower aliphatic solvents.
ABRASION RESISTANCE	Excellent
MINIMUM APPLICATION TEMPERATURE	+40°F. (+4.4°C.)
SERVICE TEMPERATURE RANGE	-50°F. to +220°F. (-45.1°C. to +103.4°C.)

38 Locke Road, Concord, New Hampshire 03301-5416 ◊ 800-881-2633 New Hampshire: 603-225-5500 ◊ Fax 800-225-6001 New Hampshire: 603
Corporate Headquarters, 2285 West County Road C, St. Paul, Minnesota 55113-2567 ◊ 612-633-0633 800-328-0852 ◊ Fax 612-633-7122

Computype®
IDentification Concepts

VOID PATTERN

FACE STOCK	2 mil clear polyester
ADHESIVE	1 mil permanent white acrylic with high initial tack. The adhesive is applied in a pattern that will remain on the labeled surface when the label is removed. The word "VOID" will appear through the label when it is removed.
LINER	55# densified kraft paper
LAMINATE	Two options are available for this product: a 1 mil clear polyester with a gloss finish, or a 1 mil matte version which was a low luster finish. Both laminates are bonded to the face stock with a 0.8 mil permanent ultra-clear adhesive.

GENERAL CHARACTERISTICS

DIMENSIONAL STABILITY	Excellent
CHEMICAL RESISTANCE	Resistant to water, mild acids, salt and alkalis, most petroleum based greases, oils and lower aliphatic solvents.
ABRASION RESISTANCE	Excellent with laminate. Poor when no laminate is used.
MINIMUM APPLICATION TEMPERATURE	+40°F. (+4°C.)
SERVICE TEMPERATURE RANGE	-40°F. to +250°F. (-40°C. to +121°C.)

38 Locke Road, Concord, New Hampshire 03301-5416 ◦ 603-225-5500 800-881-2633 ◦ Fax 603-225-7306
Corporate Headquarters, 2285 West County Road C, Saint Paul, Minnesota 55113-2567 ◦ 612-633-0633 800-328-0852 ◦ Fax 612-633-7122

FLAP Labels

Market research indicates this construction is the only chemically resistant label capable of onsite generation.

Boeing
Johnson
98C-000153
Silver
3/9/98
Huntsville

The Labels are...

a 2-piece label set comprised of a chemical resistant flap label for microscope slides and/or samples and a non-flap label to be used on worksheets, tissue blocks, requisition forms or photographs.

The Flap label construction was developed for use in the laboratory and high stress, chemically rigorous environments, such as cytology, histology and cytogenetic laboratories. Slides can be labeled prior to processing. *This label is patent pending.*

Chemical resistance is provided...

by applying the overlabel material after data printing. The following chemicals and stains have been tested to insure image protection by the overlabel material.

Chemical	Time	Results and Observations
Labels were attached to microscope slide and total submerged in the listed chemical	*Tests were performed at room temperature. Labels were observed hourly*	*Observations were made by visual inspection of the label construction, the overlabel and label adhesive and the image.*
Water	5 hours	No effect to label
Methanol	5 hours	No effect to label
Ethanol	5 hours	4 hours slight adhesive breakdown at edge of label, no effect on image
Acetone	5 hours	5 hours slight adhesive breakdown at edge of label, no effect on image
Xylene	5 hours	4 hours slight adhesive breakdown at edge of label, no effect on image
Toluene	5 hours	4 hours slight adhesive breakdown at edge of label, no effect on image

Staining and Standard Laboratory Chemicals and Techniques...

All stains and chemicals were evaluated using standard laboratory methods. The following methods were observed to have no effect on the BioPath Flap label.

Papanicolaou Stain (Pap Stain)
Iodine Stain
Silver Stain
Gram Stain
PAS Stain
Hematoxylin Stain (organic and aqueous)
Methyl Green Stain
Microwave preparation in aqueous solutions
Trichrome Stain
Wright Stain
Bleach
Hydrogen Peroxide
Glacial Acetic Acid
Giemsa Stain
Iron Stain
Deparaffinization of microscope slides